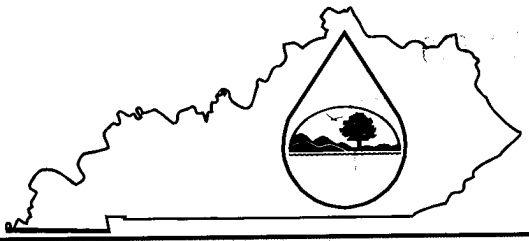
KPDES FORM HQAA



Kentucky Pollutant Discharge Elimination System (KPDES)

High Quality Water Alternative Analysis

The Antidegradation Implementation Procedures outlined in 401 KAR 5:030, Section 1(3)(b)5 allows an applicant who does not accept the effluent limitations required by subparagraphs 2 and 3 of 5:030, Section 1(2)(b) to demonstrate to the satisfaction of the Environmental and Public Protection Cabinet that no technologically or economically feasible alternatives exist and that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the water is located. The approval of a POTW's regional facility plan pursuant to 401 KAR 5:006 shall demonstrate compliance with the alternatives analysis and socioeconomic demonstration for a regional facility. This demonstration shall also include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Permit Information

Facility Name:	**Matt/Co, Inc.**	**KPDES NO.:**	**KY0105783**
Address:	**439 Meadows Branch**	**County:**	**Floyd**
City, State, Zip Code:	**Prestonsburg, KY 41653**	**Receiving Water Name:**	**Sugarloaf Branch**

II. Alternatives Analysis - For each alternative below, discuss what options were considered and state why these options were not considered feasible.

1. **Discharge to other treatment facilities.** Indicate which treatment works have been considered and provide the reasons why discharge to these works is not feasible.

Reference Attached II, Alternatives Analysis, Item 1.

2. **Use of other discharge locations.** Indicate what other discharge locations have been evaluated and the reasons why these locations are not feasible.

Reference Attached II, Alternatives Analysis, Item 2.

II. Alternatives Analysis - continued

3. **Water reuse or recycle.** Provide information about opportunities for water reuse or recycle at this facility. If water reuse or recycle is not a feasible alternative at this facility, please indicate the reasons why.

Reference Attached II, Alternatives Analysis, Item 3.

4. **Alternative process or treatment options.** Indicate what process or treatment options have been evaluated and provide the reasons they were not considered feasible.

Reference Attached II, Alternatives Analysis, Item 4.

II. Alternatives Analysis - continued

5. **On-site or subsurface disposal options.** Discuss the potential for on-site or subsurface disposal. If these options are not feasible, then please indicate the reasons why.

Reference Attached II, Alternatives Analysis, Item 5.

6. **Evaluation of any other alternatives to lowering water quality.** Describe any other alternatives that were evaluated and provide the reasons why these alternatives were not feasible.

Reference Attached II, Alternatives Analysis, Item 6.

III. Socioeconomic Demonstration

1. State the positive and beneficial effects of this facility on the existing environment or a public health problem.

   Reference Attached III, Socioeconomic Demonstration, Item 1.

2. Describe this facility's effect on the employment of the area

   Reference Attached III, Socioeconomic Demonstration, Item 2.

3. Describe how this facility will increase or avoid the decrease of area employment.

   Reference Attached III, Socioeconomic Demonstration, Item 3.

4. Describe the industrial or commercial benefits to the community, including the creation of jobs, the raising of additional revenues, the creation of new or additional tax bases.

   Reference Attached III, Socioeconomic Demonstration, Item 4.

5. Describe any other economic or social benefits to the community.

   Reference Attached III, Socioeconomic Demonstration, Item 5.

III. Socioeconomic Demonstration - continued

	Yes	No
6. Will this project be likely to change median household income in the county?	☒	☐
7. Will this project likely change the market value of taxable property in the county?	☒	☐
8. Will this project increase or decrease revenues in the county?	☒	☐
9. Will any public buildings be affected by this system?	☐	☒

10. How many households will be *economically* or *socially* impacted by this project? **25**
Reference Attached III, Socioeconomic Demonstration, Item 10.

11. How will those households be *economically* or *socially* impacted? (For example, through creation of jobs, educational opportunities, or other social or economic benefits.)

Reference Attached III, Socioeconomic Demonstration, Item 11.

	Yes	No
12. Does this project replace any other methods of sewage treatment to existing facilities? (If so describe how)	☐	☒

Reference Attached III, Socioeconomic Demonstration, Item 12.

	Yes	No
13. Does this project treat any existing sources of pollution more effectively? (If so describe how.)	☒	☐

Reference Attached III, Socioeconomic Demonstration, Item 12.

III. Socioeconomic Demonstration - continued

	Yes	No
14. Does this project eliminate any other sources of discharge or pollutants? (If so describe how.)	☐	☒

Reference Attached III, Socioeconomic Demonstration, Item 14.

15. How will the increase in production levels positively affect the socioeconomic condition of the area?

Reference Attached III, Socioeconomic Demonstration, Item 15.

16. How will the increase in operational efficiency positively affect the socioeconomic condition of the area?

Reference Attached III, Socioeconomic Demonstration, Item 16.

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	**Clark Pergrem, President**	**Telephone No.:**	**606-886-0611**
Signature:	Clark Pergrem	**Date:**	**October 3, 2007**

II. Alternative Analysis

Item 1 Alternative treatment works have been investigated. The nearest water treatment system according to the Prestonsburg Utilities is at Prestonsburg, which is approximately 8.3 miles away. It would cost approximately $221,600 at $40/foot to contract the installation of 5,540 feet of collection lines and another $1,765,600 to send the discharge to the nearest treatment facility at Prestonsburg. This would be a total cost of $1,987,200 to collect and transport the discharge to the Prestonsburg facility. A sedimentation pond would also need to be installed at the Prestonsburg facility to remove the silt from the discharges. Construction and maintenance of this sedimentation would cost approximately $40,000. Total costs to collect, transport and treat the discharges in this manner would exceed $2,027,200.

Item 2 Sugarloaf Branch is the only creek which can directly receive the discharge from this operation along Route 1428. As stated previously, to collect and gather the discharge from this area would cost $221,600 at $40.00 a foot for piping. This cost is exclusive of the $1,765,600 to transport to Prestonsburg.

The streams within a reasonable distance empty into the Levisa Fork. This added expense as an alternative is not viable since Levisa will eventually receive the discharges anyway.

Item 3 Water could be reused for dust suppression at the project site; however, the amount used is minimal when compared to the total discharge. The total drainage area is approximately 300 acres with a discharge of 600 gallons per minute or approximately 36,000 gallons per hour.

While a portion of the water could be used for dust suppression, it is generally required only during dry times when discharges are low or non-existent. Again, the amount of water used would be minimal. A water truck can carry approximately 5,000 gallons of water. Roads, etc. are generally watered twice a day during dry times. This equates to no other water is needed for recycling or reuse with the operation.

Item 4 Construction of a small package plant at the site is not feasible due to the cost of purchasing and installing a small package plant ($50,000). Additional costs would be incurred to maintain the facility, perform repairs when necessary and remove the plant after operations are complete. Construction of silt fences and straw bales are inadequate and not permissible for this amount of disturbance.

Item 5 The only way to store the discharge on site is with a pond. To maintain the water on site without a discharge would require a very large pond. This pond would have to be built in the stream thus impacting a vast portion of the stream and causing a more detrimental environmental impact that is not needed. It is nearly impossible to construct a facility that would never discharge. The cost of constructing such a structure would magnify the original pond construction cost of $10,000 by 100 fold.

Item 6 Other alternatives reviewed include reducing the standards for discharge or avoiding the project altogether.

By reducing the water quality limits, the project would experience increases in costs and additional time spent. Larger in-stream ponds would have to be constructed which would have a substantial negative impact on streams and could cost as much as $1,000,000 for construction and stream mitigation of each. Large volumes of water would need to be stored within these structures producing more danger if a structural failure were to occur. The costs of removing these ponds would also be much greater (approximately $100,000 per pond).

Another option to consider is to avoid the project altogether. This would have many negative affects on the area including reduction of employment and the loss of valuable coal that currently keeps Kentucky's electric costs the lowest in the nation. Avoiding this operation would not only affect coal miners but also the many businesses that provide support to the mining industry. This would eliminate the 25 new jobs. It would cancel indirect affects on approximately 50 local suppliers and their families. It would do away with the 1.1 million dollars of coal severance taxes and the income taxes which come directly into both the state and local economy.

III. Socioeconomic Demonstration

Item 1 This operation will provide sediment control facilities in areas where there have been previous mining. These facilities will control the discharge of an area covering approximately 300 acres.

The movement of sediment is mostly unabated within the area but the proposed mining operation will create and maintain sediment control structures in the form of ponds. These will treat existing problems and reduce or eliminate their effect on the environment.

Item 2 This mining operation would provide employment for approximately 25 men. These jobs provide higher wages than other industry jobs in Floyd County. The average weekly wage in the mining industry for Floyd County is $778.76. The average weekly wage for all industries in Floyd County is $545.49 (U.S. Bureau of Labor Statistics).

Item 3 The economy of Floyd County is dependent on the mining industry. The proposed mine would be a new mine with all new personnel needed for operation. It will directly provide employment for approximately 25 men. This would give out-of-work miners and associated personnel an opportunity for employment while also providing possibilities for entry-level personnel to gain experience in the mining industry. This will also affect the industries that supply the material and equipment needed for mining, as well as engineering services and training that are needed for the mining industry for employment of as many as 50 other people.

Item 4 Each new mine proposed will solidify the employment for people who may currently be employed looking for better paying jobs in the mining industry. This would allow experienced personnel to advance from current positions thus opening up new positions for less experienced miners who need employment. The proposed life of this mine is 5 years with additions possible. Approximately 611,174 tons is expected to be recovered from this mine which will generate around $1,168,870 in severance taxes. Floyd County will receive approximately $175,330 (15%) of these taxes to be used for local education, health care, and other city and county projects.

New revenue for Floyd County would also be generated from local income, property and sales taxes. The facilities will create additional revenue to the local businesses of the area through supplies and services needed for the mining operation and fulfilling the needs of the employees of the operation. The proposed mining will increase economic benefits to the area and will perpetuate those already in existence.

Item 5 The jobs this proposed mine will create provide some of the highest wages in Floyd County. With an average weekly wage of$778.76, a Floyd County miner makes approximately $233.00 dollars more on the week than the average industry worker in Floyd County. The creation of these jobs also allows taxes to be collected spurring community development and the creation of non-coal related jobs. Severance taxes can be used to improve schools, water lines, sewage facilities and other community resources of Floyd County.

Item 10 The facility is expected to employ approximately 25 men. Thus it will impact the 25 households of those men plus the households of at least another 50 local business owners in Floyd and surrounding counties and their employees that provide goods and services to the facility.

Item 11 The households of the 25 employees will be impacted by the higher than average incomes provided by the jobs. The average weekly wage in the mining industry for Floyd County is $778.76. The average weekly wage for all industries in Floyd County is $545.49 (U.S. Bureau of Labor Statistics). Another 50 households of the business owners and workers who provide services for the mine will be impacted by the increased revenue this mine will provide to the existing businesses. The employees will be impacted positively with a more secure employment outlook due to the increased revenue.

Item 12 There are no other existing sewage treatment facilities located within the area to replace. The nearest facility is 8.3 miles away.

Item 13 Any discharges that exist in the proposed mining area because of pre-law mining and logging activities along with all other discharges in the area will now be treated under this operation.

Item 14 This area has been logged and a portion of the Broas seam has been previously contour mined by pre-law operations. Drainage that flows through previously mined areas and areas that have been logged will flow through proposed sediment ponds. Thus these current and anticipated discharges will be treated in the proposed structures.

Item I5 The increase in productivity levels not only provides jobs in Floyd County at a higher than average wage ($778.76 for mining jobs vs. $545.49 for other industries) but will create additional revenue for the businesses of the area. The additional revenue of the local businesses and the severance tax dollars (approximately $1,168,870) generated by the project will provide the local government with additional tax revenues. These can be utilized for public safety including law enforcement, fire control, and ambulance services while also aiding in the industrial and economic development of the area.

Item 16 By conducting the preponderance of this operation through contour mining we are disturbing much less surface area and accessing the coal in a more environmentally friendly way. Discharges will be reduced drastically as the surface area involved is only a fraction of what would be involved in a surface area mining operation. Efficiency is increased as much less overburden needs to be removed and costs can be kept down thus providing more money to be available for the workers and in turn the economy of the area when the workers purchase goods such as homes, automobiles and food.

The contour mining portion of this permit will return mine areas to A.O.C. while reestablishing approximate original drainage patterns and vegetation.